

Infosafe No™	1CH1D	Issue Date : March 2014	RE-ISSUED by KINETIKP
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Product Name : **BORIC ACID**

Classified as hazardous

1. Identification

GHS Product Identifier	BORIC ACID		
Company Name	Kinetik Pty Ltd (ABN 53 605 811 532)		
Address	Unit 10, 12 - 16 Robart Court, Narangba Queensland 4506 Australia		
Telephone/Fax Number	Tel: 07 3203 0401 Fax: 07 3203 0421		
Recommended use of the chemical and restrictions on use	Analytical reagent, antibacterial agent, artificial gems, bactericide, borates, carpets, cosmetics, crockery, dyeing cotton and textiles, electric condensers, enamels, eyewash, fireproofing fabrics, fungus control on citrus fruits, glass fibres, hardening steel, hats, heat-resistant (borosilicate) glass, impregnating wicks, insecticide, insecticide, laboratory reagent, leather, manufacture of cements, metallurgy, nickel electroplating baths, ointment, painting, photography, porcelain, preservative, printing, soaps and weatherproofing wood.		
Other Names	<u>Name</u>	<u>Product Code</u>	
	Orthoboric acid, Boracic acid		
	BORIC ACID	550	
Other Information	EMERGENCY CONTACT NUMBER: +61 07 3203 0401 Business hours: 8:30am to 5:00pm, Monday to Friday.		

Kinetik Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Kinetik Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Kinetik Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Toxic to Reproduction: Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H360 May damage fertility. May damage the unborn child.
Pictogram (s)	Health hazard



Precautionary statement – Prevention	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P281 Use personal protective equipment as required.
Precautionary statement – Response	P308+P313 IF exposed or concerned: Get medical advice/attention.

3. Composition/information on ingredients

Chemical Characterization	Solid				
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	<u>Hazard Symbol</u>	<u>Risk Phrase</u>
	Boric acid	10043-35-3	100 %		

4. First-aid measures

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Inhalation	Remove victim to fresh air. Seek medical advice if effects persist.
Ingestion	Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Do not induce vomiting. Seek immediate medical assistance.
Skin	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Seek immediate medical advice.
Eye contact	Irrigate with copious quantity of water for 15 minutes. Seek medical assistance if symptoms persist.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically. Large intravenous doses of isotonic salt solution and plasma have been shown to act as an antidote. Care should be observed in applying ointments and dressings which contain boron over large areas of the body where the skin has been destroyed. It can be absorbed by the body in this way, affecting the central nervous system.
Other Information	For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Specific Methods	Use measures suitable for extinguishing surrounding fire. Water mist, foam, carbon dioxide, dry powder.
Specific hazards arising from the chemical	Material does not burn. Fire or heat will produce irritating, poisonous and/or corrosive gases.
Decomposition Temp.	185 °C (Melting point).
Precautions in connection with Fire	Use suitable protective equipment for surrounding fire.

6. Accidental release measures

Personal Precautions	Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.
Environmental Precautions	Prevent from entering into drains, ditches, rivers or the sea.

7. Handling and storage

Precautions for Safe Handling	Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Only use in well-ventilated areas.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry place. Store in well ventilated area. Keep containers closed at all times.

8. Exposure controls/personal protection

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by NOHSC Australia for this product. There is a blanket limit of 10 mg/m ³ for dusts or mists when limits have not otherwise been established.
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Eye Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

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Hand Protection	Rubber or plastic gloves recommended. Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	Wear suitable protective clothing to prevent skin contact. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	White granules or powder.
Odour	Odourless.
Decomposition Temperature	185 °C (Melting point).
Boiling Point	300 °C
Solubility in Water	50 g/L (@ 21 °C) Solubility in water is increased by HCl, citric acid, tartaric acid and heat.
Solubility in Organic Solvents	Soluble in alcohol, acetone and glycerol.
Specific Gravity	1.435 at 15 °C (water = 1)
pH	~ 5.1 (1.8g/l, 25 °C)
Vapour Pressure	2.7 hPa (20 °C)
Flammability	Non combustible material.
Molecular Weight	61.83
Other Information	Taste: Faintly bitter.

10. Stability and reactivity

Chemical Stability	Stable under normal use conditons.
Conditions to Avoid	Incompatible materials, excess heat, dust generation, high temperatures.
Incompatible Materials	Potassium, acetic anhydride, alkali metals, alkali carbonates and hydroxides.
Hazardous Decomposition Products	Boron compounds, boron oxides, borate fumes.
Possibility of hazardous reactions	Contact with potassium or acetic anhydride may cause explosion.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat): 2660 mg/kg.
Acute Toxicity - Dermal	LD50 (rat): >2000 mg/kg.
Ingestion	May be harmful if swallowed and absorbed. Swallowing can result in nausea, vomiting and diarrhoea followed by reddening, shedding and blistering of skin. Swallowing large quantities (> 0.3 g/kg or > 15 g / 50 kg person) may be fatal. Absorption of large quantities may cause agitation, spasms, tiredness, ataxia (lack of coordination) and drop in body temperature. Other symptoms include: central nervous system depression, characterised by excitement, followed by headache, dizziness, fatigue and coma. May cause circulatory system failure. May cause disturbances to the digestive tract, peripheral nervous system, urinary and endocrine system.
Inhalation	May be harmful if inhaled. Dust causes irritation of the respiratory tract.
Skin	May be harmful if absorbed through the skin. Causes skin irritation. May be harmful by absorption through open wounds. May cause alteration in behaviour, sense organs, metabolism, the

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	gastrointestinal tract, respiratory tract, depression of the circulation, persistent vomiting and diarrhoea, followed by profound shock and coma. The temperature becomes sub-normal and a scarletina-form rash may cover the entire body.
Eye	May be harmful if in contact with eyes. Dust causes irritating to eyes.
Carcinogenicity	No evidence of carcinogenic properties.
Chronic Effects	Ingestion or absorption may cause nausea, diarrhea, abdominal cramps, erythematous lesions on skin and mucous membranes, circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has occurred from <5 g in infants and from 5 to 20 g in adults. Prolonged absorption can result in anorexia, weight loss, gastrointestinal irritation, vomiting, mild diarrhoea, skin rash, alopecia, convulsions and anaemia. May cause kidney damage. Chronic use may cause borism - dry skin, eruptions and gastric disturbances.
Mutagenicity	No evidence of mutagenic effects.
Other Information	Substance should NOT be handled by pregnant staff.

12. Ecological information

Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	No bioaccumulation is to be expected (log P(o/w) <1.0).
Information on Ecological Effects	No ecological problems are to be expected when the product is handled and used with due care and attention.
Acute Toxicity - Daphnia	LC50 (Water flea): 53.2 mg/l/21d.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
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15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	S5

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Substances Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Contact Person/Point	DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Kinetik Pty Ltd accepts no responsibility whatsoever for its accuracy or for any results

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Empirical Formula & Structural Formula

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